

Claims

1. A fluid monitoring apparatus for monitoring a fluid in a fluid mains supply, the apparatus comprising means for connecting the apparatus to the mains supply, a testing chamber, a fluid tester, testing a variable of a fluid in the testing chamber and a purger for purging a volume of fluid from the testing chamber which volume of fluid is substantially larger than the volume of the testing chamber, thereby replacing the fluid in the testing chamber with a new fluid volume.
2. A fluid monitoring apparatus according to claim 1, in which the apparatus is suitable for coupling to a hydrant connected to the mains supply.
3. A fluid monitoring apparatus according to claim 1 or claim 2, in which the apparatus comprises a pressure sensor for measuring the fluid pressure.
4. A fluid monitoring apparatus according to any preceding claim, in which the apparatus comprises a purge controller for controlling the purger to determine the volume to be purged.
5. A fluid monitoring apparatus according to claim 4, in which when dependent on claim 3, the purge controller uses the measured pressure to determine the period for which the purger should operate.
6. A fluid monitoring apparatus according to claim 5, in which the period is determined by comparing the

pressure in a look-up table for a suitable purge time.

- 5 7. A fluid monitoring apparatus according to any one of claims 4 to 7, in which the purge controller comprises a microprocessor.
- 10 8. A fluid monitoring apparatus according to any preceding claim, in which the purger is configured to act for a purge time such that the fluid from the mains supply enters the testing chamber.
- 15 9. A fluid monitoring apparatus according to any preceding claim, in which the fluid tester comprises a turbidity tester.
- 20 10. A fluid monitoring apparatus according to any preceding claim, in which the apparatus comprises an electrical conductivity tester.
11. A fluid monitoring apparatus according to any preceding claim, in which the apparatus comprises a temperature tester.
- 25 12. A fluid monitoring apparatus according to any preceding claim, in which the apparatus is configured whereby purged fluid is purged from the apparatus to atmosphere.
- 30 13. A fluid monitoring apparatus according to any preceding claim, in which the apparatus comprises a memory for storing fluid test information.

14. A fluid monitoring apparatus according to claim 13,
in which the apparatus comprises means to enable data
from the memory to be downloaded to an external
device.
- 5 15. A fluid monitoring apparatus according to any
preceding claim, in which the apparatus comprises a
power cell.
- 10 16. A fluid monitoring apparatus according to any
preceding claim, in which the fluid comprises a
liquid.
- 15 17. A fluid monitoring apparatus according to claim 16,
in which the liquid comprises water.
18. A fluid monitoring apparatus according to any
preceding claim, in which the mains supply is a mains
water supply.
- 20 19. A fluid mains to which an apparatus according to any
one of claims 1 to 18 is coupled.
- 25 20. A fluid mains according to claim 19, in which the
fluid mains is a liquid mains.
21. A fluid mains according to claim 19 and claims 20, in
which the liquid mains is a water mains.
- 30 22. A method of operating a fluid monitoring apparatus
for monitoring a fluid in a fluid mains supply, which
method comprises the steps of connecting the
apparatus to a mains supply, testing a variable of a

fluid in a testing chamber and purging a volume of fluid from the testing chamber which volume of fluid is substantially larger than the volume of the testing chamber, thereby replacing the fluid in the testing chamber with a new fluid volume.

5